

27. The method of claim 21, wherein said at least one control signal further comprise downloadable executable code targeted to said processor of said at least one of said plurality of receiver stations, said downloadable executable code programming one of a way and method in which said processor responds to said instruct signal.

28. The method of claim 21, wherein said at least one receiver station is one of adapted to detect said at least one control signal and programmed to respond to said instruct signal based on a signal location in an information transmission, said method further comprising the step of causing at least a portion of one of said at least one control signal and said instruct signal to be transmitted in said signal location.

II. REMARKS

A. Introduction

The Final Office Action dated September 29, 1998 (Final Office Action) has been carefully reviewed and the foregoing amendments made in response thereto.

Claim 3, 4, 8, 9, 14, 18-21, and 26 are amended. Claims 3-28 are pending in the application.

Claims 1-20, 26, and 28 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 8, 9, 12, and 18-28 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 3-7, 9-14, 17-21, and 23-28 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by Martin et al., U.S. Pat. No. 3,848,193.

Claims 8 and 16 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Martin et al., U.S. Pat. No. 3,848,193 in view of Kato et al., U.S. Pat. No. 4,031,548.

Claims 15 and 22 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Martin et al. U.S. Pat. No. 3,848,193 in view of Campbell et al., U.S. Pat. No. 4,62,268.

Claims 3-28 remain active in this application. No new matter is presented in the foregoing amendments. Approval and entry of same is respectfully requested.

B. Response to Requirement Imposed Upon Applicants to Resolve Alleged Conflicts Between Applicants' Applications.

Applicants note that the requirement of paragraph 5 of the Office Action mailed January 5, 1998, has been essentially reiterated in paragraph 5 of the Final Office Action. Applicants respectfully maintain the traversal of the requirements of paragraph 5 of the Final Office Action and reiterate below the reasons for traversal.

Paragraph 5 of the Final Office Action requires Applicants to either:

- (1) file terminal disclaimers in each of the related 329 applications terminally disclaiming each of the other 329 applications; or
- (2) provide an affidavit attesting to the fact that all claims in the 329 applications have been reviewed by applicant and that no conflicting claims exist between the applications; or
- (3) resolve all conflicts between claims in the related 329 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 329 applications.

In addition, Examiner states that failure to comply with any one of these requirements will result in abandonment of the application.

Examiner states that the requirement has been made because conflicts exist between claims of the related co-pending applications, including the present application. Examiner sets forth only the serial numbers of the co-pending applications without an indication of which claims are conflicting. Examiner has also attached an Appendix providing what is deemed to be clear evidence that conflicting claims exist between the 329 related co-pending applications and the present application. Further, Examiner states that an analysis of all claims in the 329 related

co-pending applications would be an extreme burden on the Office requiring millions of claim comparisons.

Applicants respectfully traverse these requirements in that Examiner has both improperly imposed the requirements, and has incorrectly indicated that abandonment will occur upon failure to comply with the requirement. Applicants' traversal is supported by the fact that 37 C.F.R. § 1.78 (b) does not, under the present circumstances, provide Examiner with authority to require Applicants to either: 1) file terminal disclaimers; 2) file an affidavit; or 3) resolve all apparent conflicts. Additionally, the penalty of abandonment of the instant application for failure to comply with the aforementioned requirement is improper for being outside the legitimate authority to impose abandonment upon an application. The following remarks in Section (B) will explain Applicants' basis for this traversal.

**1. The PTO's New Requirement is an Unlawfully
Promulgated Substantive Rule Outside the
Commissioner's Statutory Grant of Power**

The PTO Commissioner obtains his statutory rulemaking authority from the Congress through the provisions of Title 35 of the United States Code. The broadest grant of rulemaking authority -- 35 U.S.C. § 6 (a) -- permits the Commissioner to promulgate regulations directed only to "the conduct of proceedings in the [PTO]". This provision does NOT grant the Commissioner authority to issue substantive rules of patent law. *Animal Legal Defense Fund v. Quigg*, 932 F.2d 920, 930, 18 U.S.P.Q.2d 1677, 1686 (Fed. Cir. 1991).¹ Applicants respectfully submit that the Examiner's creation of a new set of requirements based upon 37 C.F.R. § 1.78(b) constitutes an unlawful promulgation of a substantive rule in direct contradiction of a long-established statutory and regulatory scheme.

¹ Accord *Hoechst Aktiengesellschaft v. Quigg*, 917 F.2d 522, 526, 16 USPQ2d 1549, 1552 (Fed. Cir. 1990); *Glaxo Operations UK Ltd. v. Quigg*, 894 F.2d 392, 398-99, 13 USPQ2d 1628, 1632-33 (Fed. Cir. 1990); *Ethicon Inc. v. Quigg*, 849 F.2d 1422, 1425, 7 USPQ2d 1152, 1154 (Fed. Cir. 1988).

2. The PTO's Requirement is a Substantive Rule

The first determination is whether the requirement as imposed by the PTO upon Applicants is substantive or a procedural rule. The Administrative Procedure Act offers general guidelines under which all administrative agencies must operate. A fundamental premise of administrative law is that administrative agencies must act solely within their statutory grant of power. *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984). The PTO Commissioner has NOT been granted power to promulgate substantive rules of patent law. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996), citing, *Animal Legal Defense Fund v. Quigg*, 932 F.2d 920, 930, 18 U.S.P.Q.2d 1677, 1686 (Fed. Cir. 1991).

The appropriate test for such a determination is an assessment of the rule's impact on the Applicants' rights and interests under the patent laws. *Fressola v. Manbeck*, 36 U.S.P.Q.2d 1211, 1215 (D.D.C. 1995). As the PTO Commissioner has no power to promulgate substantive rules, the Commissioner receives no deference in his interpretation of the statutes and laws that give rise to the instant requirement. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996), citing, *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984). When agency rules either (a) depart from existing practice or (b) impact the substantive rights and interests of the effected party, the rule must be considered substantive. *Nat'l Ass'n of Home Health Agencies v. Scheiker*, 690 F.2d 932, 949 (D.C. Cir. 1982), *cert. denied*, 459 U.S. 1205 (1983).

a. The PTO's Requirement is Substantive Because it Radically Changes Long Existing Patent Practice by Creating a New Requirement Upon Applicants Outside the Scope of 37 C.F.R. § 1.78 (b)

The Examiner's requirement is totally distinguishable from the well articulated requirement authorized by 37 C.F.R. § 1.78 (b), because it (1) creates and imposes a new requirement to avoid abandonment of the application based on the allegation that conflicts exist between claims of the related 328 co-pending applications, and (2) it results in an effective final double patenting rejection without the PTO's affirmative double patenting rejection of the

claims. Long existing patent practice recognizes only two types of double patenting, double patenting based on 35 U.S.C. § 101 (statutory double patenting) and double patenting analogous to 35 U.S.C. § 103 (the well-known obviousness type double patenting).² These two well established types of double patenting use an objective standard to determine when they are appropriate³ and have a determinable result on the allowability of the pending claims.

The Examiner's new requirement represents a radical departure from long existing patent practice relevant to conflicting claims between co-pending applications of the same inventive entity. Two well established double patenting standards are based on an objective analysis of comparing pending and *allowed* claims. However, in the present application, there are no *allowed* claims. The Examiner's new requirement to avoid a double patenting rejection presumes that conflicts exist between claims in the present application and claims in the 327 copending applications. This presumption of conflicts between claims represents a radical departure from long existing patent practice as defined by 37 C.F.R. § 1.78 (b), which states:

Where two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application.

Clearly, the only requirement authorized by the rule is the elimination of conflicting claims from all but one application where conflicting claims have been determined to exist. Furthermore, in order to determine that conflicting claims do in fact exist in multiple applications, the only possible analysis is obviousness-type double patenting, since there are no

²MPEP § 804(B)(1) states, in an admittedly awkward fashion, that the inquiry for obviousness type double patenting is analogous to a rejection under 35 U.S.C. 103: "since the analysis employed in an obvious-type double patenting determination parallels the guidelines for a 35 U.S.C. 103 rejection, the factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis".

³ The objective test for same invention double patenting is whether one of the claims being compared could be literally infringed without literally infringing the other. The objective test for obviousness type double patenting is the same as the objective nonobviousness requirement of patentability with the difference that the disclosure of the first patent may not be used as prior art.

allowed or issued claims by which to employ the 35 U.S.C. § 101 statutory double patenting analysis. Once obviousness-type double patenting analysis has been applied and conflicting claims have been determined to exist, only a *provisional* obviousness-type double patenting rejection is possible until claims from one application are allowed.

In summary, the Examiner's new requirement departs from long-established practice because it (1) creates and imposes a new requirement to avoid abandonment of the application based on the allegation that conflicts exist between claims of the related 328 co-pending applications, and (2) it results in an effective final double patenting rejection without the PTO's affirmative double patenting rejection of the claims.

Therefore, the Examiner's new requirement departs from existing practice and therefore is a **substantive rule** beyond the authority of the PTO and is therefore, invalid.

**b. The New Requirement is Also a Substantive Rule
Because it Adversely Impacts the Rights and
Interests of Applicants to Benefits of the Patent**

The rights and benefits of a U.S. patent is solely a statutory right. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996). The essential statutory right in a patent is the right to exclude others from making, using and selling the claimed invention during the term of the patent. Courts have recognized that sometimes new procedural rules of the PTO are actually substantive rules, e.g. when the new rule made a substantive difference in the ability of the applicant to claim his discovery. *Fressola v. Manbeck*, 36 U.S.P.Q.2d 1211, 1214 (D.D.C. 1995), citing, *In re Pilkington*, 411 F.2d 1345, 1349; 162 U.S.P.Q. 145 (C.C.P.A. 1969); and *In re Steppan*, 394 F.2d 1013, 1019; 156 U.S.P.Q. 143 (C.C.P.A. 1967).

The new requirement, on its face and as applied here, is an instance of a PTO rule making a substantive difference in Applicants' ability to claim their invention and, therefore, must be considered a substantive rule. The requirement denies Applicants rights and benefits expressly conferred by the patent statute. The measure of the value of these denied rights and benefits is that the requirement, as applied here, would deny Applicants the full and complete PTO

examination of Applicants' claims on their merits, as specified by 37 C.F.R. § 1.105. In addition, to file terminal disclaimers in each of the related 328 applications terminally disclaiming each of the other 327 applications based on the PTO's incomplete examination on the merits would deny Applicants the benefit of the full patent term of 17 years on each of Applicants' respective applications. Applicants respectfully submit that the requirement has a huge impact on their rights and interests in the presently claimed invention.

c. Conclusion: Substantive Rule

In summary, the requirement is a change to long existing practice and/or has a substantive impact on the rights and interests of Applicants to their invention. Either finding means that the new requirement is a substantive rule. Since the Commissioner has no power to issue substantive rules, the requirement is an improperly promulgated substantive rule having no force of law.

3. The PTO's Requirement is Outside the Scope of 37 C.F.R. § 1.78 (b)

Rule 78 (b) states that:

Where two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application.

The only **requirement** that Rule 78 (b) authorizes is the elimination of conflicting claims from all but one co-pending application.

In the instant Final Office Action, Examiner has not required the elimination of all conflicting claims from all but one application, but instead has required Applicants to: 1) file terminal disclaimers in each of the related 328 applications; 2) provide an affidavit; or 3) resolve all conflicts between claims in the related 328 applications. None of the options in the requirement is authorized by Rule 78 (b), and therefore Applicants respectfully submit that such a requirement is improper.

With respect to the PTO's authority to act within Rule 78 (b) regarding the rejection of conflicting claims, M.P.E.P. § 822.01 states that:

Under 37 CFR § 1.78 (b), the practice relative to overlapping claims in applications copending before the examiner..., is as follows: Where claims in one application are unpatentable over claims of another application of the same inventive entity because they recite the same invention, *a complete examination should be made of the claims of each application* and all appropriate rejections should be entered in each application, including rejections based upon prior art. *The claims of each application may also be rejected on the grounds of provisional double patenting on the claims of the other application* whether or not any claims avoid the prior art. Where appropriate, the same prior art may be relied upon in each of the applications. M.P.E.P. 822.01 (6th Ed., Rev. 3, 1997), (*emphasis added*).

In light of the requirement of the Final Office Action, M.P.E.P. § 822.01 and 37 C.F.R. § 1.78 (b) are not applicable since there has not been any rejection with regard to the elimination of conflicting claims from all but one co-pending application.

4. The Assertion That Failure to Comply with the Requirement Will Result in Abandonment of Applicants' Application is Improper

Applicants' prospective failure to comply with the above requirements cannot properly result in abandonment of the present application. Applicants respectfully submit that abandonment of an application can properly occur only:

- (1) for failure to respond within a provided time period (under Rule 135);
- (2) as an express abandonment (under Rule 138); or
- (3) the result of failing to timely pay the issue fee (under Rule 316).

There is no provision in the rules permitting abandonment for failure to comply with any of the presented requirements. To impose an improper requirement upon Applicants and then hold the application is to be abandoned for failure to comply with the improper requirement violates the rules of practice before the USPTO. Furthermore, Examiner is in effect attempting to create a substantive rule which is above and beyond the rulemaking authority of the USPTO, and therefore is invalid.

In the *Application of Mott*, 539 F.2d 1291, 190 U.S.P.Q. 536 (C.C.P.A. 1976), the applicant had conflicting claims in multiple applications. The C.C.P.A. held that action by the Examiner which would result in automatic abandonment of the application was legally untenable. *Id.* at 1296, 190 U.S.P.Q. at 541. In the present application, Examiner has asserted that there are conflicting claims in multiple applications, and that non-compliance of the Final Office Action's requirement will result in an automatic abandonment. Therefore, under *Mott's* analysis, the Final Office Action's result of abandonment of Applicants' application is legally untenable.

5. Response to Apparent Conflict of Claims

Applicants submit that the presentation of the Final Office Action Appendix fails to demonstrate any conflicts between claims of the present application and claims of the co-pending applications. Rather, the Final Office Action Appendix compares representative claims of *other* applications in attempt to establish that "conflicting claims exist between the 328 related co-pending applications." Absent any evidence of conflicting claims between the Applicants' present application and any other of Applicants' co-pending applications, any requirement imposed upon Applicants to resolve such alleged conflicts is improper.

6. Request for Withdrawal of Requirement

Therefore, Applicants respectfully request that Examiner reconsider and withdraw the requirement that Applicants: (1) file terminal disclaimers in each of the related 328 applications terminally disclaiming each of the other 327 applications; (2) provide an affidavit attesting to the fact that all claims in the 328 applications have been reviewed by applicant and that no conflicting claims exist between the applications; or (3) resolve all conflicts between claims in the above identified 328 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 328 applications, which upon failing to do so will abandon the application.

7. Filing of Supplemental Oath

Notwithstanding the foregoing, Applicants will file a supplemental oath under 37 C.F.R. § 1.67 for each application when Examiner identifies allowable subject matter. Applicants respectfully propose that the filing of individual supplemental oaths attesting to the absence of claim conflicts between previously patented claims and subsequently allowed claims is a more reasonable method of ensuring the patentable distinctness of subsequently allowed claims.

Under 37 C.F.R. § 1.105, § 1.106 & § 1.78 (b), Examiner has the duty to make every applicable rejection, including double patenting rejection. Failure to make every proper rejection denies Applicants all rights and benefits related thereto, e.g., Applicants' right to appeal, etc. Once obviousness-type double patenting analysis has been applied and conflicting claims have been determined to exist, only a *provisional* obviousness-type double patenting rejection is possible until claims from one application are allowed.

C. Response to Rejections under 35 U.S.C. § 112

1. Specification Support of Claims 3-20, 26, and 28

Paragraph 6 of the Final Office Action rejects claims 3-20, 26, and 28 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The following tables list Applicants' claim language in the left column which corresponds to the specification support from the earliest priority document, U.S. Pat. No. 4,064,490, in the right columns.

a. Claim 8

Claim Language	Spec. Reference	Specification Terminology
a processor processes one of a code and	For example, col. 2 line 64 through col. 3 line 3 or	The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programing unit, or a unique purchase order number identifying the proper use of a programing unit, or a general instruction identifying whether a programing unit is to be retransmitted immediately or recorded for delayed transmission.

Claim Language	Spec. Reference	Specification Terminology
datum designating one of a television channel and a television program	col. 15 lines 59-65 and col. 3 lines 6-8 or col. 16 line 39 or col. 17 line 40.	<p>The signals for which the decoders are monitoring are likely to be unique digital codes that may identify each programing or data unit received and the source of each. They may identify networks, broadcast stations, channels on cable systems, and possibly times of transmission. They may convey unique identifier codes for each program or commercial. In the case of data transmitted to the micro-computer, they may be unique codes that identify the source and suppliers of the data.</p> <p>Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Each discrete bit of this information</p> <p>instruction and information signals</p>
controlling a tuner to tune a receiver to receive said one of a television channel and a television program designated by said one of a code and datum	Col. 19 lines 24-25, col. 19 lines 14-15 and col. 19 lines 20-23.	<p>instruct tuner, 214, to switch box, 201, to channel X</p> <p>all program and channel identifiers on all programing being cablecast</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>
controlling a selective transfer device to input to a control signal detector at least a portion of said one of a television channel and a television program designated by said one of a code and datum	Col. 19 lines 24-29 and col. 17 line 65 through col. 18 line 1, col. 19 lines 14-15 and col. 19 lines 20-23.	<p>microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."</p> <p>TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating.</p> <p>all program and channel identifiers on all programing being cablecast</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>
controlling a control signal detector to search for at least one control signal in said one of a television channel and a television program designated by said one of a code and datum	Col. 17 lines 28-33, col. 19 lines 14-15 and col. 19 lines 20-23.	<p>control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods.</p> <p>all program and channel identifiers on all programing being cablecast</p> <p>Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.</p>

Claim Language	Spec. Reference	Specification Terminology
controlling a selective transfer to input to a computer control signals detected in said one of a television channel and a television program designated by	Col. 19 lines 27-29 with col. 17 line 65 through col. 18 line 4 and col. 19 lines 45-48,	microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating. Decoder, 203, transfers all received signals to processor or monitor, 204, which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205.
said one of a code and datum	col. 19 lines 14-15 and col. 19 lines 20-23.	all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a computer to respond to at least one control signal in said one of a television channel and a television program designated by	Col. 19 line 64 through col. 20 line 1 with respect to col. 19 lines 45-53,	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of hisown stocks' performance When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202, upon command .
said one of a code and datum	col. 19 lines 14-15 and col. 19 lines 20-23.	all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a television monitor to display one of video and audio contained in said one of a television channel and a television program designated by said one of a code and datum	Col. 19 lines 27-29, col. 19 lines 14-15 and col. 19 lines 20-23.	microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.

Claim Language	Spec. Reference	Specification Terminology
controlling a video recorder to one of record and play one of video and audio contained in said one of a television channel and a television program designated by said one of a code and datum	Col. 19 lines 25-27 with col. 19 lines 1-4, col. 19 lines 14-15 and col. 19 lines 20-23.	instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a selective transfer device to communicate to one of a video recorder and a television monitor said one of a television channel and a television program designated by said one of a code and datum	Col. 19 lines 23-29, col. 19 lines 14-15 and col. 19 lines 20-23.	Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.

b. Claim 9

Claim Language	Spec. Reference	Specification Terminology
controlling a tuner ...	Col. 19 lines 24-25, col. 19 lines 14-15 and col. 19 lines 20-23.	instruct tuner, 214, to switch box, 201, to channel X all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a selective transfer device to input ...	Col. 19 lines 24-29 and col. 17 line 65 through col. 18 line 1, col. 19 lines 14-15 and col. 19 lines 20-23.	microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating. all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is

Claim Language	Spec. Reference	Specification Terminology
controlling a control signal detector ...	Col. 17 lines 28-33, col. 19 lines 14-15 and col. 19 lines 20-23.	being televised on channel X. control information connections between signal processor, 130, and the remote decoders which would permit signal decoder, 130, to alter the methods of operation of said remote decoders. Such control information connections are included in signal processing apparatus and methods. all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a selective transfer to input ...	Col. 19 lines 27-29 with col. 17 line 65 through col. 18 line 4 and col. 19 lines 45-48, col. 19 lines 14-15 and col. 19 lines 20-23.	microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating. Decoder, 203, transfers all received signals to processor or monitor, 204, which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a computer ...	Col. 19 line 64 through col. 20 line 1 with respect to col. 19 lines 45-53, col. 19 lines 14-15 and col. 19 lines 20-23.	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of hisown stocks' performance When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202, upon command . all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a television monitor ...	Col. 19 lines 27-29,	microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall

Claim Language	Spec. Reference	Specification Terminology
	col. 19 lines 14-15 and col. 19 lines 20-23.	Street Week." all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a video recorder ...	Col. 19 lines 25-27 with col. 19 lines 1-4, col. 19 lines 14-15 and col. 19 lines 20-23.	instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record. all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
controlling a selective transfer device to communicate ...	Col. 19 lines 23-29, col. 19 lines 14-15 and col. 19 lines 20-23.	Then, in a predetermined fashion, microcomputer, 205, may instruct tuner, 214, to switch box, 201, to channel X and may instruct control system, 220, to turn video recorder, 217, on and record "Wall Street Week," and also microcomputer, 205, may instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week." all program and channel identifiers on all programing being cablecast Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.

c. Claim 10

Claim Language	Spec. Reference	Specification Terminology
inputting an instruct-to-contact signal ...	Col. 8 lines 58-62.	Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.
inputting an instruct-to-select signal ...	Col. 18 lines 45-68.	When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,
inputting an instruct-to-generate signal ...	Col. 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays
inputting an instruct-to-coordinate signal ...	Col. 19 line 63 through col. 20 line 2 with	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set,

Claim Language	Spec. Reference	Specification Terminology
	col. 19 line 30.	202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic. Co-ordinating Multimedia Presentations in Time
inputting an instruct-to-overlay signal ...	Col. 19 line 63 through col. 20 line 1	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.
inputting an instruct-to-transmit signal ...	Col. 19 line 63 through col. 20 line 1	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.
inputting to a computer a signal ...	Col. 2 line 64 through col. 3 line 8, col. 7 lines 35-39, and col. 17 line 62 through col. 18 line 4.	The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programing unit, or a unique purchase order number identifying the proper use of a programing unit, or a general instruction identifying whether a programing unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion that enables buffer/comparator, 8, among other things, to assemble signal units from signal words. Signal processor, 200, is always operating and monitors all incoming channels. It can convey such signals to microcomputer, 205, whenever it receives them. TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating. Decoder, 203, transfers all received signals to processor or monitor, 204, which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205.
inputting to a computer executable code ...	Col. 2 line 64 through col. 3 line 8,	The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programing unit, or a unique purchase order number identifying the proper use of a programing unit, or a general instruction identifying whether a programing unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word"

Claim Language	Spec. Reference	Specification Terminology
	col. 7 lines 35-39, and col. 19 lines 45-53.	<p>hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.</p> <p>When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202, upon command.</p>

d. Claim 11

Claim Language	Spec. Reference	Specification Terminology
"broadcast signal" in each of the following steps finds support at col. 6 line 31.		broadcast
inputting an instruct-to-contact signal ...	Col. 8 lines 58-62.	Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit.
inputting an instruct-to-select signal ...	Col. 18 lines 45-68.	When it identifies a signal of interest, it relays that information and the channel identifier, in this illustration, to microcomputer, 205. In a predetermined fashion, either microcomputer, 205, or signal processor, 200, instructs tuner, 223, to set cable converter box, 222, to the proper channel,
inputting an instruct-to-generate signal ...	Col. 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays
inputting an instruct-to-coordinate signal ...	Col. 19 line 63 through col. 20 line 2 with col. 19 line 30.	<p>This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.</p> <p>Co-ordinating Multimedia Presentations in Time</p>
inputting an instruct-to-overlay signal ...	Col. 19 line 63 through col. 20 line 1	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer

Claim Language	Spec. Reference	Specification Terminology
		generated graphic of his own stocks' performance overlay the studio generated graphic.
inputting an instruct-to-transmit signal ...	Col. 19 line 63 through col. 20 line 1	This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205. This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of his own stocks' performance overlay the studio generated graphic.
inputting to a computer a signal ...	Col. 2 line 64 through col. 3 line 8, col. 7 lines 35-39, and col. 17 line 62 through col. 18 line 4.	<p>The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the proper use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.</p> <p>Signal processor, 200, is always operating and monitors all incoming channels. It can convey such signals to microcomputer, 205, whenever it receives them. TV signal decoder, 203, can also identify such signals but only in the one TV channel transferred by box, 201, to TV set, 202, and then only when TV set, 202, is on and operating. Decoder, 203, transfers all received signals to processor or monitor, 204, which identifies the signals as addressed to microcomputer, 205, and transfers them to microcomputer, 205.</p>
inputting to a computer executable code ...	Col. 2 line 64 through col. 3 line 8, col. 7 lines 35-39, and col. 19 lines 45-53.	<p>The term "signal unit" hereinafter means one complete signal instruction or information message unit. Examples of signal units are a unique code identifying a programming unit, or a unique purchase order number identifying the proper use of a programming unit, or a general instruction identifying whether a programming unit is to be retransmitted immediately or recorded for delayed transmission. The term "signal word" hereinafter means one full discrete appearance of a signal as embedded at one time in one location on a transmission. Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.</p> <p>Buffer/comparator, 8, organizes the data stream that it receives according to a pre-determined fashion that enables buffer/comparator, 8, among other things, to assemble signal units from signal words.</p> <p>When the "Wall Street Week" transmission begins at 8:30</p>

Claim Language	Spec. Reference	Specification Terminology
		PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202, upon command .

e. **Claim 14**

Claim Language	Spec. Reference	Specification Terminology
receiving at a transmitter station a portion of said downloadable executable code which is effective at a receiver station to perform	Col. 19 lines 60-63 (and col. 11 lines 50-54 with col. 19 lines 14-15 and col. 19 lines 20-23) with col. 10 lines 45-53, col. 8 lines 58-65 and col. 17 lines 39-44.	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87 pass all program and channel identifiers on all programing being cablecast on the multi-channel system. Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X. When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202, upon command . Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programing transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed, and transfer such signals to such equipment as directed.
transferring said downloadable executable code to a transmitter	Col. 19 lines 60-63 (and col. 11 lines 54-57)	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing

Claim Language	Spec. Reference	Specification Terminology
receiving said at least one control signal at said transmitter station,	Col. 19 lines 60-63 (and col. 11 lines 50-54),	transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87
wherein said at least one control signal operates to execute said downloadable executable code	col. 19 line 64 through col. 20 line 1 with respect to col. 19 lines 48-53	This signal instructs microcomputer, 205, to transmit the first overlay to TV set, 202, for as long as it receives the same instruction signal from processor, 204. The viewer then sees a microcomputer generated graphic of hisown stocks' performance These signals instruct microcomputer, 205, to generate several graphic video overlays, which microcomputer, 205, has the means to generate and transmit and TV set, 202, has the means to receive and display, and to transmit these overlays to TV set, 202, upon command.
transferring said at least one control signal to said transmitter, and transmitting an information transmission comprising said downloadable executable code and said at least one control signal	Col. 19 lines 60-63 (and col. 11 lines 54-57)	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.

f. Claim 16

Claim Language	Spec. Reference	Specification Terminology
wherein a television program is displayed at a receiver station of said plurality of receiver stations and said downloadable executable code programs one of said receiver station processor and a computer to one of output one of	Col. 19 lines 28-29.	instruct switch, 216, to turn TV set, 202, on and tuner, 215, to tune appropriately to "Wall Street Week."
video,	Col. 19 lines 67 through col. 20 line 2.	The viewer then sees a microcomputer generated graphic of hisown stocks' performance overlay the studio generated graphic.
audio,	col. 18 lines 14-26.	TV signal decoder, 203, detects signals in the programing transmission on the channel which signals it transfers to monitor or processor, 204. Monitor or processor, 204, determines that certain signals are addressed to switch, 212,

Claim Language	Spec. Reference	Specification Terminology
		and transfers these signals to switch, 212. These signals instruct switch, 212, to turn power on to radio, 209, and its associated equipment, including a conventional digital tuner, 213. Monitor or processor, 204, also identifies signals addressed to tuner, 213, which it transfers accordingly. These signals instruct tuner, 213, to tune radio, 209, to the proper frequency for the simulcast.
and text in the context of a television program,	Col. 20 lines 28-43 with col. 20 lines 47-50.	a signal is identified in the incoming programing on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221. The signal transmission from processor, 204, also passes a signal word to signal processor, 200, which, in a predetermined fashion, signal processor, 200, decrypts and transfers to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe. When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.
to process a subscriber reaction to said television program,	Col. 20 lines 28-32 with respect to col 20 lines 20-28	a signal is identified in the incoming programing on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8 the host says, "If you are interested in cooking what we are preparing here and want a printed copy of the recipe for a charge of only 10 cents, press 567 on your Widget Signal Generator and Local Input." The viewer then presses buttons 567 on local input, 225, which signal is conveyed to the buffer/comparator, 8 (referring to Fig. 1), of signal processor, 200, to hold and process further in a predetermined fashion.
and to select information supplementing said television program	Col. 20 lines 28-43 with col. 20 lines 47-50	a signal is identified in the incoming programing on TV set, 202, by decoder, 203, which is also transferred by processor, 204, to buffer/comparator, 8, of signal processor, 200. This signal instructs buffer/comparator, 8, that, if 567 has been received from signal generator, 225, signal processor, 200, should, in a predetermined fashion, instruct tuner, 223, to tune cable converter box, 222, to the appropriate channel to receive the recipe in encoded digital form and instruct control means, 226, to activate printer, 221. The signal transmission from processor, 204, also passes a signal word to signal processor, 200, which, in a predetermined fashion, signal processor, 200, decrypts and transfers to decrypter, 224, to serve as the code upon which decrypter, 224, will decrypt the incoming encrypted recipe. When the transmission of the recipe is received, box 222, transfers the transmission to decrypter, 224, for decryption and thence to printer, 221, for printing.

g. Claim 18

Claim Language	Spec. Reference	Specification Terminology
receiving said at least one instruct signal to be transmitted by said remote intermediate transmitter station and delivering said at least one instruct signal to said origination transmitter, said at least one instruct signal being effective at said receiver station to perform	Col. 19 lines 60-63, col. 8 lines 58-65, and col. 17 lines 39-44.	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission Control signals can be passed to the apparatus by means of the programing transmissions input at switch, 1, and mixer, 2. An example of such a control signal is an instruction for the apparatus to contact a remote telephone unit. The processor unit, 12, has the capacity to identify instruction signals for controller, 20, and pass them to controller, 20, over control information lines. Signal processor apparatus have the ability to identify instruction and information signals in one or more inputted television and radio programing transmissions, identify and discriminate among one or more pieces of external equipment to which such signals are addressed
receiving said at least one control signal which at said remote intermediate transmitter station operates to control communication of said at least one instruct signal	Col. 19 lines 60-63 with col. 11 lines 38-57	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. Controller/computer, 73, has means for communicating control information with matrix switch, 75, and video recorder/players, 76 and 78. If incoming programing is meant for immediate transmission, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer incoming programing to the proper output channel. For example, if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.
transmitting said at least one control signal from said origination transmitter before a specific time	Col. 19 lines 60-63 with col. 11 lines 38-39	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission comparing identification signals on the incoming programing

h. Claim 19

Claim Language	Spec. Reference	Specification Terminology
embedding a specific one of said at least one control signal in one of said at least one instruct signal and in an information transmission containing said at least one instruct signal before	Col. 9 lines 31-33 with col. 11 lines 38-39 and col. 11 lines 50-57.	A digital signal is embedded by conventional generating and encoding means and transmitted in a television, radio or other transmission. comparing identification signals on the incoming programing controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87.
transmitting at least a portion of said at least one instruct signal to said remote intermediate transmitter station	Col. 19 lines 60-65.	an instruction signal is generated in the television studio originating the programing and is transmitted in the programing transmission. This signal is identified by decoder, 203, and transferred via processor, 204, to microcomputer, 205.

i. Claim 20

Claim Language	Spec. Reference	Specification Terminology
wherein said specific time is a scheduled time of transmitting one of said at least one instruct signal and information associated with said at least one instruct signal from said remote intermediate transmitter station	Col. 11 lines 38-44 with col. 11 lines 22-24	By comparing identification signals on the incoming programing with the programing schedule received earlier from local input, 74, and/or from a remote site via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. the cable television system's complete programing schedule, with each discrete unit of programing identified with a unique program code

j. Claim 26

Claim Language	Spec. Reference	Specification Terminology
transmitting to said at least one receiver station data one of that designate	Col. 11 lines 50-57 with	controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel

Claim Language	Spec. Reference	Specification Terminology
one of a time and a channel of transmission of	col. 4 lines 5-13 and col. 19 lines 14-15.	modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. These techniques employ signals embedded in programs. The advantage of such embedded signals, as compared to header and trailer signals, is that they cannot become separated inadvertently from the programing and, thereby, inhibit automatic processing, that they can convey signals to equipment that must switch manners or modes of operation during transmissions of individual units of programing, and that they can be monitored. pass all program and channel identifiers on all programing being cablecast on the multi-channel system
said instruct signal and that specify	Col. 19 lines 45-49.	When the "Wall Street Week" transmission begins at 8:30 PM on a Friday evening, several instruction signals are identified by decoder, 203, and transferred to microcomputer, 205. These signals instruct microcomputer, 205, to generate several graphic video overlays
one of title of and subject matter contained in one of	Col. 19 lines 20-23 or	Analyzing these identifier signals in a predetermined fashion, microcomputer, 205, determines that "Wall Street Week" is being televised on channel X.
	col. 18 lines 53-56.	The news services preceed each news transmission with a unique signal that uniquely identifies the company or companies to which the news item refers and/or the industries.
mass medium programming and	Col. 18 line 66 through col. 19 line 4.	microcomputer, 200, may record the information in memory or transfer it to printer, 221, for printing. In the same fashion, microcomputer, 205, may also instruct signal processor, 200, to monitor single or multiple television channels and/or radio channels for programing of interest to play or record.
data associated with said instruct signal	Col. 19 lines 35-41 and col. 19 line 67 through col. 20 line 1.	Each weekday, microcomputer, 205, receives, about 4:30 PM, by means of a digital information channel, all closing stock prices applicable that day. It may receive these directly or it may automatically query a data service for them in a predetermined fashion. It records those prices that relate to the stocks in its stored portfolio. The viewer then sees a microcomputer generated graphic of his own stocks' performance

k. Claim 28

Claim Language	Spec. Reference	Specification Terminology
causing at least a portion of one of said at least one control signal and said instruct signal to be transmitted in said signal location	Col. 11 lines 41-44 and col. 11 lines 50-57 with respect to col. 19 lines 14-15.	via network, 98, controller/computer, 73, can determine when and on what channel or channels the head end facility should transmit the programing. if controller/computer, 73, determines that programing incoming via receiver, 53, should be transmitted immediately to the field distribution system, 93, via cable channel modulator, 87, controller/computer, 73, instructs matrix switch, 75, to configure its switches so as to transfer programing transmissions inputted from TV receiver, 53, to the output that leads to modulator, 87. pass all program and channel identifiers on all programing being cablecast on the multi-channel system.

2. Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 8, 9, 12, 18-20, and 21-28 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

With respect to claim 8, in the Final Office Action it was noted that “said detected at least one control signal” lacked sufficient antecedent basis as recited. Claim 8 has been amended to positively set forth “at least one control signal.” It was further asserted in the Final Office Action that the phrase “controlling a selective transfer device to communicate to one of a video recorder and a television monitor said one of a television channel and a television program designated by said one of a code and datum” is unclear and confusing. In this step a selective transfer device is controlled to communicate to either a video recorder or a television monitor either a television channel or a television program designated by either a code or datum. Applicants respectfully submit that the claim language clearly sets forth this function.

With respect to claim 9, it was noted in the Final Office Action that the phrases “said control signal detector,” “said at least one control signal,” and “said computer” lack antecedent basis. Claim 9 has been amended to positively set forth these elements.

With respect to claim 12, it is asserted in the Final Office Action that “said at least one control signal” in line 5 has insufficient antecedent basis. Applicants respectfully submit that “said at least one control signal” finds antecedent basis in line 4 of claim 12.

With respect to claim 18, in the Final Office Action it was noted that “said remote intermediate transmitted station” lacks antecedent basis. Claim 18 has been amended to correctly refer to “said remote intermediate transmitter station.”

With respect to claim 21, in the Final Office Action it is asserted that the phrase “transferring said at least one control signal from said one of a broadcast and a cablecast transmitter station to said transmitter, said one of a broadcast and a cablecast transmitter station one of broadcasting and cablecasting said instruct signal and said at least one control signal to said plurality of receiver stations” is unclear and confusing. In this step, a control signal is transferred from either a broadcast or a cablecast transmitter station to a transmitter. Either the broadcast transmitter station or the cablecast transmitter station broadcasts or cablecasts an instruct signal and the control signal to a plurality of receiver stations. Applicants respectfully submit that the claim language clearly sets forth this function.

3. Conclusion

Applicants respectfully submit that claims 1-28 of the subject application particularly point out and claim the subject matter sufficiently for one of ordinary skill in the art to comprehend the bounds of the claimed invention. The test for definiteness of a claim is whether one skilled in the art would understand the bounds of the patent claim when read in light of the specification, and if the claims so read reasonably apprise those skilled in the art of the scope of the invention, no more is required. *Credle v. Bond*, 25 F.3d 1556, 30 U.S.P.Q.2d 1911 (Fed. Cir. 1994). The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. *In re Warmerdam*, 33 F.3d 1354, 31 U.S.P.Q.2d 1754 (Fed. Cir. 1994). Applicants have amended the claims to enhance clarity and respectfully submit that all pending claims are fully enabled by the specification and distinctly indicate the metes and bounds of the claimed subject matter.

Applicants believe that the above recited changes are sufficient to overcome the rejections under 35 U.S.C. § 112, first and second paragraph, and respectfully request withdrawal of these rejections. Applicants provide these specific embodiments in support of the pending claims by way of example only. The claims must be read as broadly as is reasonable in light of the specification, and Applicants in no way intend that their submission of excerpts/examples be construed to unnecessarily restrict the scope of the claimed subject matter.

D. Response to Rejection of Claims for Absence of Novelty

1. 35 U.S.C. § 102 (b) Rejection over Martin et al.

Claims 3-7, 9-14, 17-21 and 23-28 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by U.S. Pat. No. 3,848,193, to Martin et al. [hereinafter Martin].

a. Claim 3

With respect to claim 3, Martin fails to teach, *inter alia*, Applicants' claimed step of detecting one of a presence and an absence of a broadcast signal transmitted from a first remote station. Martin describes, at column 40, lines 13-17, "Selector 112 is preferably a simple logic circuit which is controlled by commands originating at the active NWC and received at the distribution center transmitter controller via either or both of the wireline and radio control links." Martin fails to teach that the source selector unit 112 detects the presence or absence of a broadcast signal to operate as set forth in claim 3. The presence or absence of the radio control link is not detected in Martin due the presence of the wireline.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed steps of selecting a cablecast signal for reception based on said step of detecting, said cablecast signal being transmitted from a second remote station, and receiving said cablecast signal based on said step of selecting. As Martin fails to teach the claimed step of detecting, Martin cannot teach selecting based on said step of detecting as presently set forth. Martin therefore cannot teach receiving based on said step of selecting.

Applicants respectfully submit that for at least these reasons, Martin fails to show every element of claim 3 and that accordingly Martin fails to anticipate claim 3 under 35 U.S.C. § 102(b).

b. Claim 4

With respect to claim 4, Martin fails to teach, *inter alia*, Applicants' claimed step of detecting one of a presence and an absence of a cablecast signal transmitted from a first remote station. Martin describes, at column 40, lines 13-17, "Selector 112 is preferably a simple logic circuit which is controlled by commands originating at the active NWC and received at the distribution center transmitter controller via either or both of the wireline and radio control links." Martin fails to teach that the source selector unit 112 detects the presence or absence of a cablecast signal to operate as set forth in claim 4. The presence or absence of the wireline is not detected in Martin due the presence of the radio control link.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed steps of selecting a broadcast signal for reception based on said step of detecting, said broadcast signal being transmitted from a second remote station, and receiving said broadcast signal based on said step of selecting. As Martin fails to teach the claimed step of detecting, Martin cannot teach selecting based on said step of detecting as presently set forth. Martin therefore cannot teach receiving based on said step of selecting.

Applicants respectfully submit that for at least these reasons, Martin fails to show every element of claim 4 and that accordingly Martin fails to anticipate claim 4 under 35 U.S.C. § 102(b).

c. Claim 14

With respect to claim 14, Martin fails to teach, *inter alia*, Applicants' claimed step of receiving at a transmitter station a portion of said downloadable executable code which is effective at a receiver station to perform one of the group consisting of: (a) selecting and receiving a cablecast signal based on one of a presence and absence of a broadcast signal; and (b)

selecting and receiving a broadcast signal based on one of a presence and absence of a cablecast signal. In the Final Office Action, column 7, lines 19-26 of Martin is relied upon to show this claimed step. However, Martin at column 7, lines 19-26, simply describes the use of commands initiated at the active warning center that are either sent via the wireline to all the distribution stations to effect broadcast of appropriate preprogrammed messages from selected distribution stations so that only selected receivers in the region receive the broadcast message. Martin fails to teach that these command codes are effective at a receiver station to perform selecting and receiving a cablecast signal based on one of a presence and an absence of a broadcast signal as asserted in the Final Office Action. Martin also fails to teach that these command codes are received at the active warning center or transmitter station. To the contrary, Martin describes at column 7, lines 19-20 that the commands are initiated at the active warning center.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed step of transferring said downloadable executable code to a transmitter. As discussed above, Martin fails to teach downloadable executable code as presently set forth. Martin, therefore, cannot teach transferring said downloadable executable code as presently claimed.

Martin also fails to teach, *inter alia*, Applicants' claimed step of receiving said at least one control signal at said transmitter station, wherein said at least one control signal operates to execute said downloadable executable code. Martin fails to teach any control signal that operates to execute the commands relied upon to show downloadable executable code. Accordingly, Martin fails to teach receiving at least one such control signal at the active warning center. Martin thus fails to teach receiving a control signal at said transmitter station as presently claimed.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed step of transferring said at least one control signal to said transmitter, and transmitting an information transmission comprising said downloadable executable code and said at least one control signal. As Martin fails to teach at least one control signal as presently set forth, Martin cannot teach transferring said at least one control signal as presently claimed. As discussed above, Martin also fails to

teach downloadable executable code. Martin therefore cannot teach an information transmission comprising said downloadable code and said at least one control signal. Accordingly, Martin cannot teach transmitting such an information transmission.

Applicants respectfully submit that for at least these reasons, Martin fails to show every element of claim 14 and that accordingly Martin fails to anticipate claim 14 under 35 U.S.C. § 102(b).

d. Claim 18

With respect to claim 18, Martin fails to teach, *inter alia*, Applicants' claimed step of receiving said at least one instruct signal to be transmitted by said remote intermediate transmitter station and delivering said at least one instruct signal to said origination transmitter, said at least one instruct signal being effective at said receiver station to perform one of the group consisting of: (a) selecting and receiving a cablecast signal based on one of a presence and absence of a broadcast signal; and (b) selecting and receiving a broadcast signal based on one of a presence and absence of a cablecast signal. In the Final Office Action, column 7, lines 19-26 of Martin is relied upon to show this claimed step. However, Martin at column 7, lines 19-26, simply describes the use of commands initiated at the active warning center that are either sent via the wireline to all the distribution stations to effect broadcast of appropriate preprogrammed messages from selected distribution stations so that only selected receivers in the region receive the broadcast message. Martin fails to teach that these command codes are effective at a receiver station to perform selecting and receiving a cablecast signal based on one of a presence and an absence of a broadcast signal as asserted in the Final Office Action. Martin also fails to teach that these command codes are to be transmitted by a remote intermediate transmitter station or are delivered to an origination transmitter.

Martin also fails to teach, *inter alia*, Applicants' claimed step of receiving said at least one control signal which at said remote intermediate transmitter station operates to control communication of said at least one instruct signal. Martin fails to teach any control signal that operates to control communication of the commands relied upon to show an instruct signal.

Accordingly, Martin fails to teach receiving at least one such control signal at the active warning center. Martin thus fails to teach receiving a control signal as presently claimed.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed step of transmitting said at least one control signal from said origination transmitter before a specific time. As Martin fails to teach at least one control signal as presently set forth, Martin cannot teach transmitting said at least one control signal as presently claimed.

Applicants respectfully submit that for at least these reasons, Martin fails to show every element of claim 18 and that accordingly Martin fails to anticipate claim 18 under 35 U.S.C. § 102(b).

e. Claim 21

With respect to claim 21, Martin fails to teach, *inter alia*, Applicants' claimed step of receiving at one of a broadcast and a cablecast transmitter station an instruct signal which is effective at said at least one receiver station to perform one of the group consisting of: (a) selecting and receiving a cablecast signal based on one of a presence and absence of a broadcast signal; and (b) selecting and receiving a broadcast signal based on one of a presence and absence of a cablecast signal. In the Final Office Action, column 7, lines 19-26 of Martin is relied upon to show this claimed step. However, Martin at column 7, lines 19-26, simply describes the use of commands initiated at the active warning center that are either sent via the wireline to all the distribution stations to effect broadcast of appropriate preprogrammed messages from selected distribution stations so that only selected receivers in the region receive the broadcast message. Martin fails to teach that these command codes are effective at a receiver station to perform selecting and receiving a cablecast signal based on one of a presence and an absence of a broadcast signal as asserted in the Final Office Action. Martin also fails to teach that these command codes are received at either a broadcast transmitter station or a cable cast transmitter station. To the contrary, Martin describes at column 7, lines 19-20 that the commands are initiated at the active warning center.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed step of transferring said instruct signal from said one of a broadcast and a cablecast transmitter station to a transmitter.

As discussed above, Martin fails to teach an instruct signal as presently set forth. Martin, therefore, cannot teach transferring said instruct signal as presently claimed.

Martin also fails to teach, *inter alia*, Applicants' claimed step of receiving at least one control signal at said one of a broadcast and a cablecast transmitter station, said at one least control signal designating said at least one receiver station of said plurality of receiver stations in which said instruct signal is addressed. Martin fails to teach any control signal that designates a receiver station in which the commands relied to show an instruct signal are addressed.

Accordingly, Martin fails to teach receiving at least one such control signal at a broadcast or cablecast transmitter station. Martin thus fails to teach receiving a control signal as presently claimed.

Accordingly, Martin fails to teach, *inter alia*, Applicants' claimed step of transferring said at least one control signal from said one of a broadcast and a cablecast transmitter station to said transmitter, said one of a broadcast and a cablecast transmitter station one of broadcasting and cablecasting said instruct signal and said at least one control signal to said plurality of receiver stations. As Martin fails to teach at least one control signal as presently set forth, Martin cannot teach transferring said at least one control signal as presently claimed.

Applicants respectfully submit that for at least these reasons, Martin fails to show every element of claim 21 and that accordingly Martin fails to anticipate claim 21 under 35 U.S.C. § 102(b).

f. Dependent claims 5-7, 9-13, 17, 19-21, and 23-28.

Claims 5-7, 9-13, 17, 19-21, and 23-28 depend from, and thus include every limitation of, at least one of independent claims 3, 4, 14, 18, and 21. As discussed above Martin fails to teach every element of any one of independent claims 3, 4, 14, 18, and 21. Therefore, *ipso facto*, Martin fails to teach every limitation of these dependent claims. Accordingly, Applicants

respectfully submit that Martin fails to anticipate claims 5-7, 9-13, 17, 19-21, and 23-28 under 35 U.S.C. § 102 (b).

2. Conclusion

Applicants respectfully submit that claims 3-7, 9-14, 17-21 and 23-28 in the present application should be allowed because these methods are not disclosed, taught, suggested, or implied by the applied prior art. For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *Scripps Clinic & Research Foundation v. Genetech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001, 18 USPQ2d 1896 (Fed. Cir. 1991). Absence from a cited reference of any element of a claim negates anticipation of that claim by the reference. *Kloster Speedsteel AB v Crucible, Inc.*, 230 USPQ 81 (Fed. Cir. 1986), *on rehearing*, 231 USPQ 160 (Fed. Cir. 1986). Accordingly, Applicants respectfully request that the 35 U.S.C. § 102 (b) rejection of claims 3-7, 9-14, 17-21 and 23-28 be withdrawn.

E. Response to Obviousness Rejection of Claims

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim recitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP 706.02(j).

1. 35 U.S.C. § 103 (a) Rejection over Martin in view of Kato.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of U.S. Pat. No. 4,031,548 to Kato [hereinafter Kato].

Claims 8 and 16 depend upon independent claims 3, 4, or 14. As discussed *supra*, Martin fails to disclose every element of claims 3, 4, 14, 18, and 21 and thus, *ipso facto*, Martin in view of Kato fails to anticipate dependent claims 8 and 16, and therefore, this rejection should be withdrawn and the claim be permitted to issue. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

2. 35 U.S.C. § 103 (a) Rejection over Martin '193 in view of Campbell '791.

Claims 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of U.S. Pat. No. 4,862,268 to Campbell et al. [hereinafter Campbell].

Claims 15 and 22 depend upon independent claims 14 and 21. As discussed *supra*, Martin fails to disclose every element of claims 3, 4, 14, 18, and 21 and thus, *ipso facto*, Martin in view of Campbell fails to anticipate dependent claims 15 and 22, and therefore, this rejection should be withdrawn and the claim be permitted to issue. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

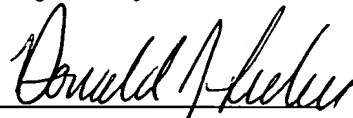
III. CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims are patentably distinguishable over the prior art of record, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

Date: March 29, 1999
HOWREY & SIMON
1299 Pennsylvania Avenue, NW
Washington, D.C. 20004

Respectfully submitted,



Thomas J. Scott, Jr.
Reg. No. 27,836
Donald J. Lecher
Reg. No. 41,933
Attorney for Applicants
Tel: (202) 383-6790